


Canyon Fuel Company, LLC  
Dugout Canyon Mine  
P.O. Box 1029  
Wellington, Utah 84542

C/007/0039  
Incoming  
#3775  


March 7, 2011

Coal Regulatory Program  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

RE: Notice of Violation #10072, Abatement Action – Suspended Solids  
Dugout Canyon Mine, Canyon Fuel Company, LLC, C/007/039, Carbon County, Utah

Dear Sirs:

Enclosed please find four copies of a revision to the M&RP Chapter 7, to address the establishment of a mine water monitoring point and a treatment plan.

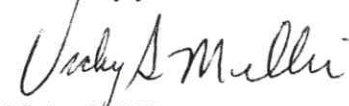
Dugout has analyzed several treatment plan options; the one chosen has been implemented (February 2011) and is preventing mine water not meeting UPDES water discharge limits from being released into Pace Creek. The non-compliant water encountered during the upset condition is no longer being discharged following approval by MSHA to discontinue pumping water away from the sealed areas.

Prior to the upset condition we had historically discharged compliant mine water at the outfalls to Pace Creek from several underground sources. One of the sources is still being discharged and thus is being sampled as required under the mine's UPDES permit. The analysis for one February UPDES sample at Outfall 005 has been received from the laboratory and is compliant for all parameters. We are confident that the analysis for the second February sample and the samples in March will be compliant for all parameters as well.

At Dugout, the process continues to develop a system(s) and refine the treatment(s) of water as it is encountered underground.

A copy of this plan has been delivered to the Price Field office.

Sincerely yours,



Vicky S. Miller

cc: Dave Spillman

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DIV. OF OIL, GAS & MINING

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Dugout Canyon Mine

**Permit Number:** C/007/039

**Title:** Notice of Violation #10072, Abatement Action

**Description,** Include reason for application and timing required to implement:

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- |   |   |
|---|---|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ <input type="checkbox"/> increase <input type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? DO# _____  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?                                     |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Does the application include operations in hydrologic basins other than as currently approved?   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 6. Does the application require or include public notice publication?   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information?   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?   |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? NOV # <u>10072</u>  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies?  |
- Explain:* \_\_\_\_\_
- |   |  |
|---|--|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use?                          |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information?                  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?            |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 15. Does the application require or include soil removal, storage or placement?                                    |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities?             |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities?          |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures?               |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 19. Does the application require or include certified designs, maps or calculation?                                |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring?                                      |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 21. Have reclamation costs for bonding been provided?  |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?               |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities?              |

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

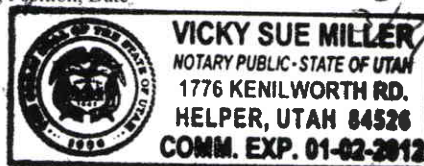
David Spillman  
Print Name

David Spillman, Engineering Manager  
Sign Name, Position, Date

Subscribed and sworn to before me this 7 day of MARCH, 20 11

Vicky Sue Miller  
Notary Public

My commission Expires: 1-2, 20 12  
Attest: State of UTAH } ss:  
County of CARBON



**For Office Use Only:**

Assigned Tracking  
Number:

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**DIV. OF OIL, GAS & MINING**

# APPLICATION FOR COAL PERMIT PROCESSING

## Detailed Schedule Of Changes to the Mining And Reclamation Plan

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Dugout Canyon Mine

Permit Number: C/007/039

**Title:** Notice of Violation #10072, Abatement Action

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

## DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED

☐ Add    ☒ Replace    ☐ Remove

Chapter 7, M&amp;RP - Pages 7-vii, 7-ix, 7-3

☒ Add    ☐ Replace    ☐ Remove

Appendix 7-13

☐ Add    ☒ Replace    ☐ Remove

Plate 7-1

☐ Add    ☐ Replace    ☐ Remove

**Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.**

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## DIV. OF OIL, GAS & MINING

## CHAPTER 7 HYDROLOGY

### LIST OF FIGURES (Continued)

<u>Figure</u>	<u>Page</u>
7-4 Hydrographs of SP-8 and SP-10 . . . . .	See Tab
7-5 Trilinear Plot of Samples Collected From the North Horn Formation . . . . .	See Tab
7-6 Trilinear Plot of Samples Collected From the Blackhawk Formation . . . . .	See Tab
7-7 Hydrographs of Monitoring Wells Completed in the Blackhawk Formation . . . .	See Tab
7-8 Hydrographs of Soldier Creek . . . . .	See Tab
7-9 Hydrographs of Dugout Creek . . . . .	See Tab
7-10 Hydrographs of Soldier Creek and Dugout Creek Showing Base Flow Separation . . . . .	See Tab
7-11 Predicted Mine-Water Inflow as a Function of Mine Length . . . . .	See Tab
7-12 Channel Stability Enhancement Structures . . . . .	See Tab

The following figures are located in Appendix 7-12:

- Figure 7-12A Pace Canyon Fan Disturbed Area Diversions
- Figure 7-12B Pace Canyon Fan Undisturbed Watershed Boundaries
- Figure 7-12C Pace Canyon Fan Sediment Trap Detail and Cross-Sections
- Figure 7-12D Sediment Basin Detail and Cross-Sections
- Figure 7-12E Pace Canyon Fan Sediment Control Map
- Figure 7-12F Pace Canyon Fan Reclamation Watershed Boundaries

### LIST OF PLATES

#### Plate

- 7-1 Hydrologic Monitoring Stations
- 7-2 Water Rights
- 7-3 Castlegate Potentiometric Surface
- 7-4 Sedimentation Pond Design
- 7-5 Disturbed Area Diversions
- 7-6 Dugout Creek Watershed Upstream from Surface Facilities

- 7-7 Undisturbed Watersheds Adjacent to Surface Facilities
- 7-8 Disturbed Area Watershed Boundaries
- 7-9 Dugout Creek Reclamation Details

## LIST OF APPENDICES

### Appendix

- 7-1 Water Rights Data
- 7-2 Groundwater Monitoring Data
- 7-3 Mayo and Associates Report
- 7-4 Monitoring Well Water-Level Data and Well Logs
- 7-5 USGS Streamflow and Water-Quality Data for Dugout Creek
- 7-6 UPDES Permit Applications
- 7-7 Surface-Water Monitoring Data
- 7-8 Sedimentation Pond Design Calculations
- 7-9 Diversion and Culvert Design Calculations
- 7-10 Hydrologic Design Methods
- 7-11 Reclamation Hydrology Calculations
- 7-12 Pace Canyon Fan Portal Site
- 7-13 MP Monitoring and Treatment Plan



### **722.300 Locations of Monitoring Stations**

Surface water and groundwater monitoring stations from which data have been collected within the permit and adjacent areas of the Dugout Canyon Mine are located as shown on Plate 7-1. Approximate surface elevations of the monitoring stations are also indicated by the topographic contours provided on Plate 7-1. The monitoring program for site MP is described in Appendix 7-13.

### **722.400 Location and Depth of Water Wells**

The Gilson water supply well is located approximately 450 feet southwest of the water tanks along the side of the water tank access road. The well depth is 300 feet and intercepts water collecting in the Gilson seam at the location shown on Plate 7-5. Groundwater monitoring wells in the area are located as shown on Plate 7-1. Depths of these wells and other completion details of the monitoring wells are summarized in Table 7-1. Refer to Appendix 7-9 for details pertaining to the Gilson water well.

### **722.500 Surface Topography**

Surface topographic features in the permit and adjacent areas are shown on the base map used for Plate 7-1.

## **723 Sampling and Analysis**

Where possible, all water samples collected for use in this M&RP have been analyzed according to methods in either the "Standard Methods for the Examination of Water and Wastewater" or 40 CFR parts 136 and 434. Where feasible, these same references have been used as the basis for sample collection.

## **724 Baseline Information**

Surface water, groundwater, and climatic resource information is presented in this section to assist in determining the baseline hydrologic conditions which exist in the permit and adjacent areas. This information provides a basis to determine if mining operations can be expected to have a significant impact on the hydrologic balance of the area.

**APPENDIX 7-13**

**MP Monitoring and Treatment Plan**



## Appendix 7-13

### MP Site Monitoring Program

Monitoring point located on 8" pipe at Pace Canyon Fan Portal, refer to attached drawing and Plate 7-1 for the location. The monitoring point is on a pipeline at the fan portal which contributes a portion of the water discharged at Outfall 005.

The field measurements and results of the laboratory analyses will be entered into the Utah Division of Oil, Gas and Mining electronic water monitoring data base using the system and requirements in place as of 2010 for entry of information into the electronic water monitoring data base. Adverse conditions, no access and no flow will be used to describe an attempt to monitor when they apply.

#### Protocols

Operational water quality measurements will be taken monthly at site MP and analyzed for parameters listed below.

#### FIELD MEASUREMENTS

	<u>REPORTED AS</u>
pH	pH units
Specific Conductivity	$\mu\text{s/cm}$ @ 25°C
Dissolved Oxygen	mg/l
Temperature	°C

#### LABORATORY PARAMETERS

Total Iron	mg/l
Dissolved Iron	mg/l
Sulfate	mg/l
Alkalinity	mg/l
Total Dissolved Solids	mg/l
Total Suspended Solids	mg/l

Monitoring, sample collection and entry of data into the Utah Division of Oil, Gas and Mining electronic water monitoring data base will be discontinued if any or all of the following events occur at monitoring site MP:

Water at the sampling location ceases to flow;

Water is compliant with limits (listed below) in the Dugout Canyon Mine UPDES permit for a period of six consecutive months; and/or

Dugout Canyon Mine seals the area of the mine discharging water to Pace Creek.

#### Dugout Canyon Mine UPDES Permit Limits

pH	Sample Between 6.5 and 9 pH units
Total Iron	Sample Maximum 1.1 mg/l
Total Dissolved Solids	Sample Maximum 2,400 mg/l
Total Suspended Solids	Sample Daily Maximum 70 mg/l

#### Proposed Plan and Measures Implemented

Discontinue discharge of groundwater to prevent additional contributions of suspended solids.

Step 1. Request revision to MSHA Ventilation Plans to allow Pace North Mains be flooded and used as water storage. Request permission from MSHA to abandon seals and their associated examination responsibilities along the Pace North Mains.

Step 2. Shut off pumps and dismantle piping system. Remove mining equipment from Pace North Mains.

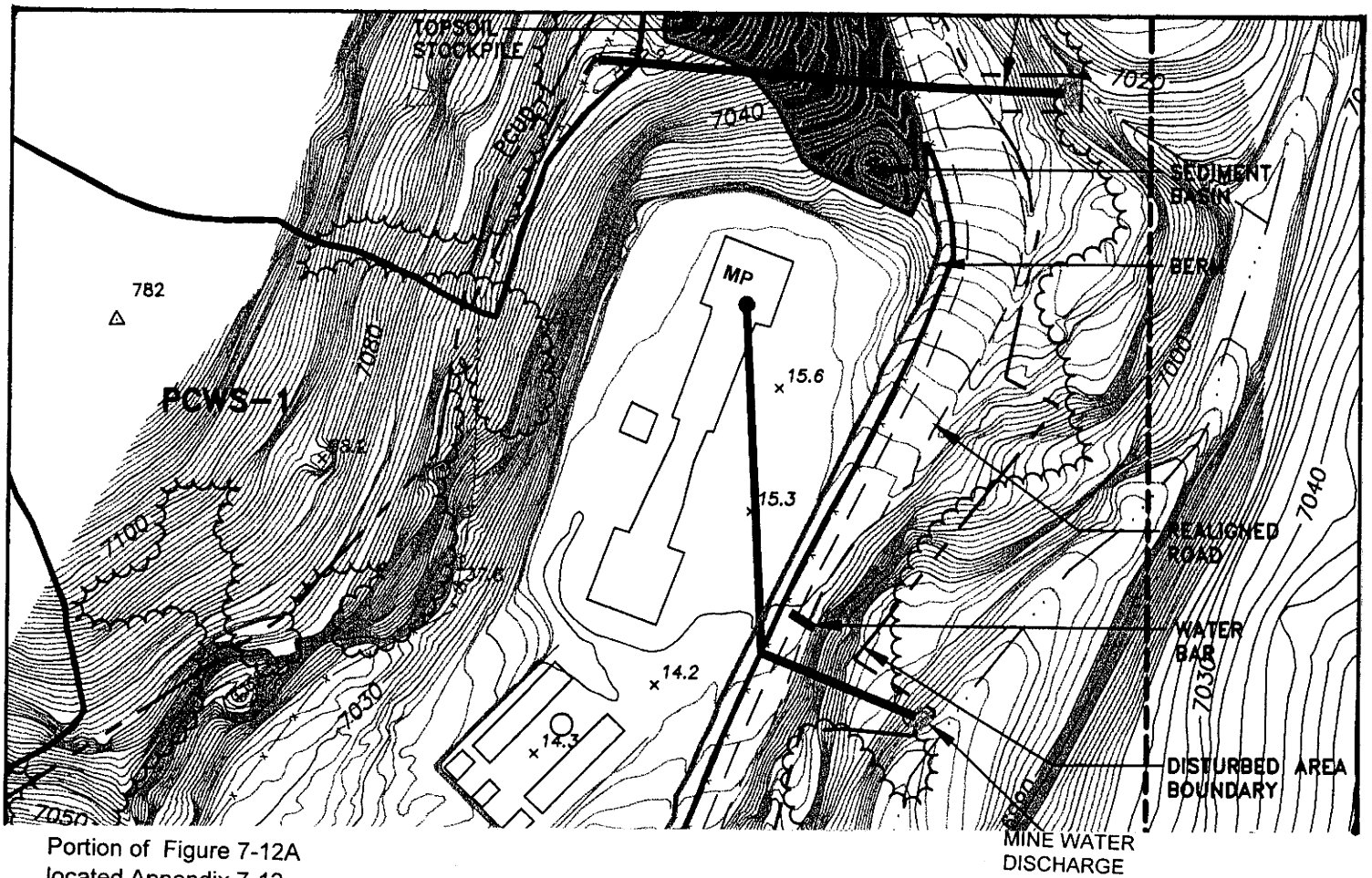
Step 3. Discontinue discharge to prevent additional contribution of suspended solids. Permission granted by MSHA February 1, 2011 and the discharge has been discontinued, therefore there is no flow at the MP monitoring point.

#### Pre-treatment Mine Water Monitoring Point

The MP location can be used for monitoring/sampling pre-treatment water in an 8" pipeline at the Pace Canyon Fan Portal. This pipeline only contributes a portion of the water being discharged to Outfall 005.

Following MSHA approval as noted above, there is no mine water pre-treatment or non-treated water being discharged at the MP monitoring/sampling location or from the mine.

Appendix 7-13



MP Monitoring Location